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Docket No. B3B-130

Serial No. 10/525,685

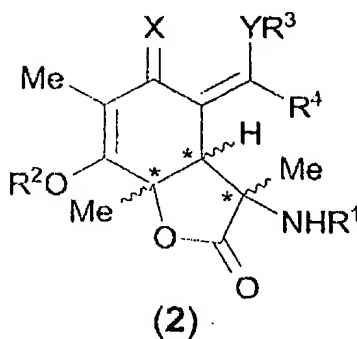
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In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

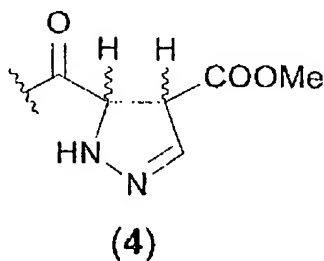
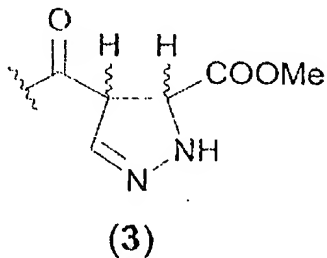
1-23 (Cancelled).

24 (Currently amended). A compound of the general formula (2):



wherein

R<sup>1</sup> is selected from the group consisting of: -H, (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), (C<sub>3</sub>-C<sub>10</sub>)-alkenyl, and acyl groups, wherein free -COOH-groups can be present on the acyl group in the form of esters; or, optionally, R<sup>1</sup> can be (3) or (4)



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$R^2$  is selected from the group consisting of: -H, (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^3$  is selected from the group consisting of: -H, (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), and acyl groups;

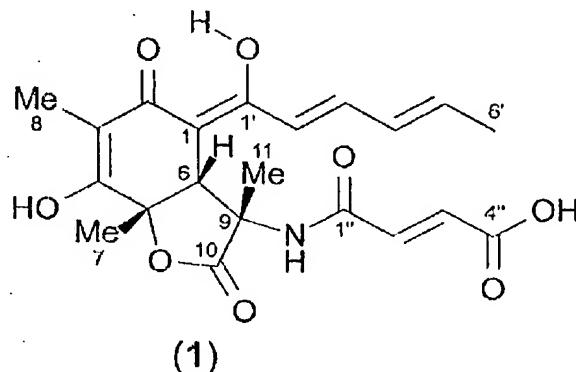
$R^4$  is selected from the group consisting of: (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), and (C<sub>3</sub>-C<sub>10</sub>)-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR<sup>5</sup>, wherein R<sup>5</sup> is a straight chain or branched chain (C<sub>1</sub>-C<sub>6</sub>)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an (R,R,R)-, (R,R,S)-, (R,S,R)-, (R,S,S)-, (S,R,R)-, (S,R,S)-, (S,S,R)- or (S,S,S)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2).

2.5 (Previously presented). The compound according to claim 24 having the formula (1):

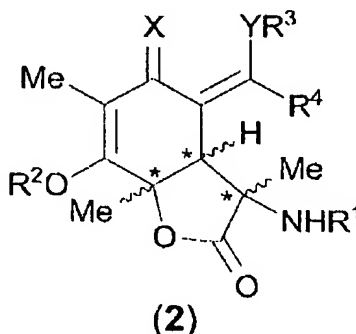


(sorbicillacton A) and derivatives thereof, their diastereomers, as well as the corresponding enantiomers, and pharmaceutically acceptable salts or solvates of this compound.

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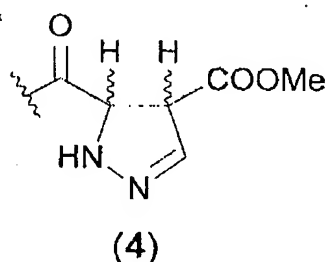
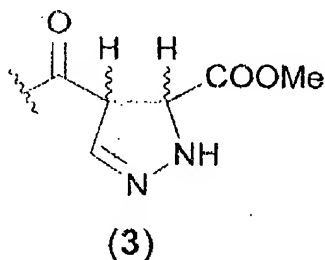
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26 (Currently amended). A method for the production of a compound of the general formula (2):



wherein

$R^1$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched),  $(C_3-C_{10})$ -alkenyl, and acyl groups, wherein free  $-COOH$ -groups can be present on the acyl group in the form of esters; or, optionally,  $R^1$  can be (3) or (4)



$R^2$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^3$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^4$  is selected from the group consisting of:  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and  $(C_3-C_{10})$ -alkenyl, wherein the alkenyl residue can contain one or more double bonds;

$X$  is selected from the group consisting of  $O$ ,  $S$ ,  $NOH$  and  $NOR^5$ , wherein  $R^5$  is a straight chain or branched chain  $(C_1-C_6)$ -alkyl;

$Y$  is  $O$ , or  $Y$  and  $X$  are  $N$ -atoms bound to each other thus forming a pyrazole ring;

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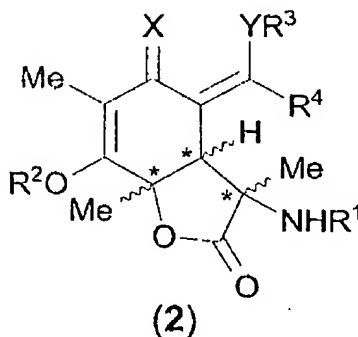
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wherein the compound can be present as an (*R,R,R*)-, (*R,R,S*)-, (*R,S,R*)-, (*R,S,S*)-, (*S,R,R*)-, (*S,R,S*)-, (*S,S,R*)- or (*S,S,S*)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2); wherein said method comprises growing a fungus of the genus *Penicillium* in a marine organism and isolating said compound from the culture medium and/or the fungal biomass.

27 --- 28 (Cancelled).

29 (Currently amended). A method for the biomimetic synthesis of a compound of the general formula (2):

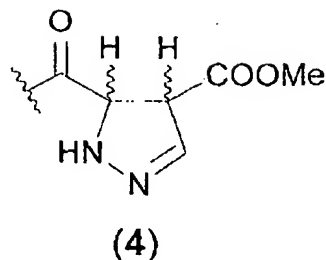
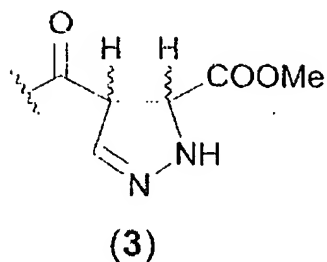


wherein

$R^1$  is selected from the group consisting of: -H, ( $C_1$ - $C_{10}$ )-alkyl (wherein alkyl is straight or branched), ( $C_3$ - $C_{10}$ )-alkenyl, and acyl groups, wherein free -COOH-groups can be present on the acyl group in the form of esters; or, optionally,  $R^1$  can be (3) or (4)

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$R^2$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^3$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^4$  is selected from the group consisting of:  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and  $(C_3-C_{10})$ -alkenyl, wherein the alkenyl residue can contain one or more double bonds;

$X$  is selected from the group consisting of  $O$ ,  $S$ ,  $NOH$  and  $NOR^5$ , wherein  $R^5$  is a straight chain or branched chain  $(C_1-C_6)$ -alkyl;

$Y$  is  $O$ , or  $Y$  and  $X$  are  $N$ -atoms bound to each other thus forming a pyrazole ring;

wherein the compound can be present as an  $(R,R,R)$ -,  $(R,R,S)$ -,  $(R,S,R)$ -,  $(R,S,S)$ -,  $(S,R,R)$ -,

$(S,R,S)$ -,  $(S,S,R)$ - or  $(S,S,S)$ -stereoisomer; and pharmaceutically acceptable salts or solvates of (2);

wherein said method comprises:

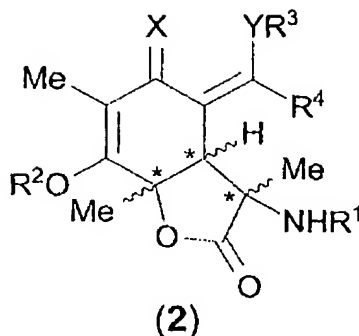
a) providing sorbicillin and/or a derivative thereof;

b) oxidative dearomatization and subsequent addition of alanin or other amino acid amino acids or an analogue thereof; and

c) subsequent attachment of fumaric acid or an analogous acyl residuc.

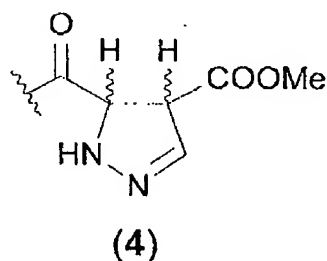
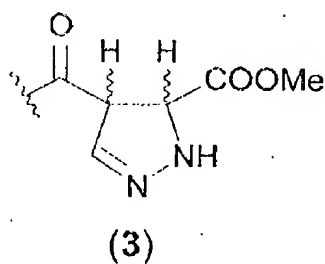
30 (Currently amended). A pharmaceutical composition comprising a compound of the general formula (2):

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wherein

$R^1$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched),  $(C_3-C_{10})$ -alkenyl, and acyl groups, wherein free  $-COOH$ -groups can be present on the acyl group in the form of esters; or, optionally,  $R^1$  can be (3) or (4)



$R^2$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^3$  is selected from the group consisting of:  $-H$ ,  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^4$  is selected from the group consisting of:  $(C_1-C_{10})$ -alkyl (wherein alkyl is straight or branched), and  $(C_3-C_{10})$ -alkenyl, wherein the alkenyl residue can contain one or more double bonds;

$X$  is selected from the group consisting of  $O$ ,  $S$ ,  $NOH$  and  $NOR^5$ , wherein  $R^5$  is a straight chain or branched chain  $(C_1-C_6)$ -alkyl;

$Y$  is  $O$ , or  $Y$  and  $X$  are  $N$ -atoms bound to each other thus forming a pyrazole ring;

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wherein the compound can be present as an (R,R,R)-, (R,R,S)-, (R,S,R)-, (R,S,S)-, (S,R,R)-, (S,R,S)-, (S,S,R)- or (S,S,S)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2); together with one or more suitable excipients and additives.

31 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in the form of a depot substance or as a precursor, together with a suitable, pharmaceutically acceptable diluent or carrier substance.

32 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount of 20 µg.

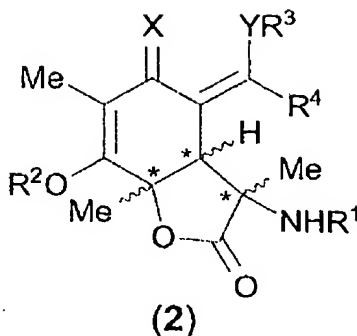
33 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that the compound is present in an amount such that a concentration range of between 0.3 and 3.0 µg/ml is present at a treatment *in vivo*.

34 (Previously presented). The pharmaceutical composition according to claim 30, characterised in that it contains further chemotherapeutics.

35 (Previously presented). The pharmaceutical composition according to claim 30, in the form of tablets, dragées, capsules, droplets, suppositories, preparations for injection or infusion for peroral, rectal or parenteral use.

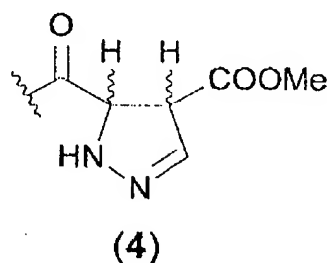
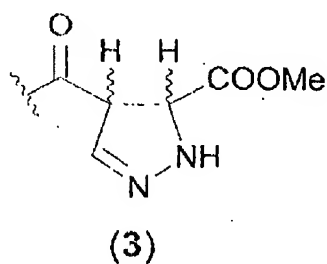
36 (Currently amended). A method for the treatment of a disease selected from the group consisting of ~~tumours, viral diseases, and inflammatory conditions~~ diseases caused by retroviruses, wherein said method comprises administering to a patient in need of such treatment a compound of the general formula (2):

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wherein

$R^1$  is selected from the group consisting of: -H, (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), (C<sub>3</sub>-C<sub>10</sub>)-alkenyl, and acyl groups, wherein free -COOH-groups can be present on the acyl group in the form of esters; or, optionally,  $R^1$  can be (3) or (4)



$R^2$  is selected from the group consisting of: -H, (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^3$  is selected from the group consisting of: -H, (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), and acyl groups;

$R^4$  is selected from the group consisting of: (C<sub>1</sub>-C<sub>10</sub>)-alkyl (wherein alkyl is straight or branched), and (C<sub>3</sub>-C<sub>10</sub>)-alkenyl, wherein the alkenyl residue can contain one or more double bonds;

X is selected from the group consisting of O, S, NOH and NOR<sup>5</sup>, wherein R<sup>5</sup> is a straight chain or branched chain (C<sub>1</sub>-C<sub>6</sub>)-alkyl;

Y is O, or Y and X are N-atoms bound to each other thus forming a pyrazole ring;

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wherein the compound can be present as an (R,R,R)-, (R,R,S)-, (R,S,R)-, (R,S,S)-, (S,R,R)-, (S,R,S)-, (S,S,R)- or (S,S,S)-stereoisomer; and pharmaceutically acceptable salts or solvates of (2).

37 (Previously presented). The method according to claim 36, comprising administering the compound in the form of a depot substance or as a precursor, together with a suitable, pharmaceutically acceptable diluent or carrier substance.

38 (Currently amended). The method according to claim 36, wherein the viral disease retrovirus is HIV-1, and the compound is administered in a concentration range of between 0.3 and 3.0 µg/ml.

39 -- 40 (Cancelled).

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